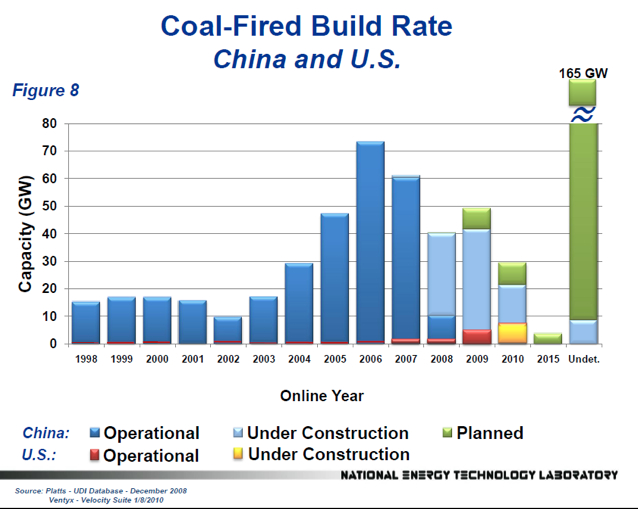
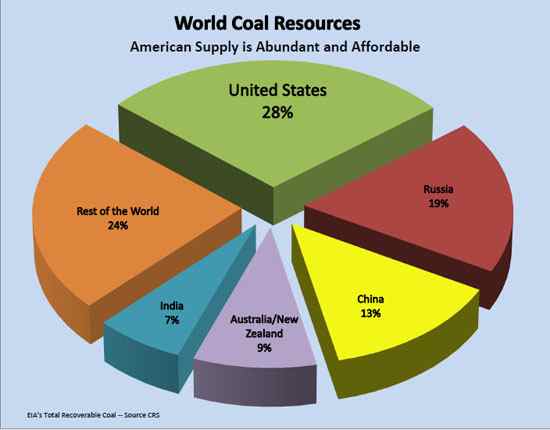
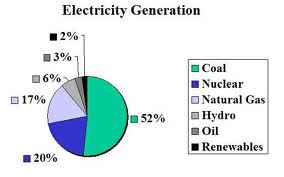
Coal has played a major role in electrical production since the first power plants that were built in the United States in the1880's. The earliest power plants used hand fed wood or coal to heat a boiler and produce steam. In 1884, the more well-organized high speed steam turbine was developed by British engineer Charles A. Parsons. This replaced the use of steam engines to generate electricity. In the 1920s, the crushed coal firing was developed. In the 1940’s, the cyclone furnace was developed. This new technology allowed the burning of poorer grade of coal with less ash production and greater overall efficiency. Presently, coal power is still based on the same methods started over 100 years ago, but improvements in all areas have brought coal power to be the cheap power source used so widely today.

# History

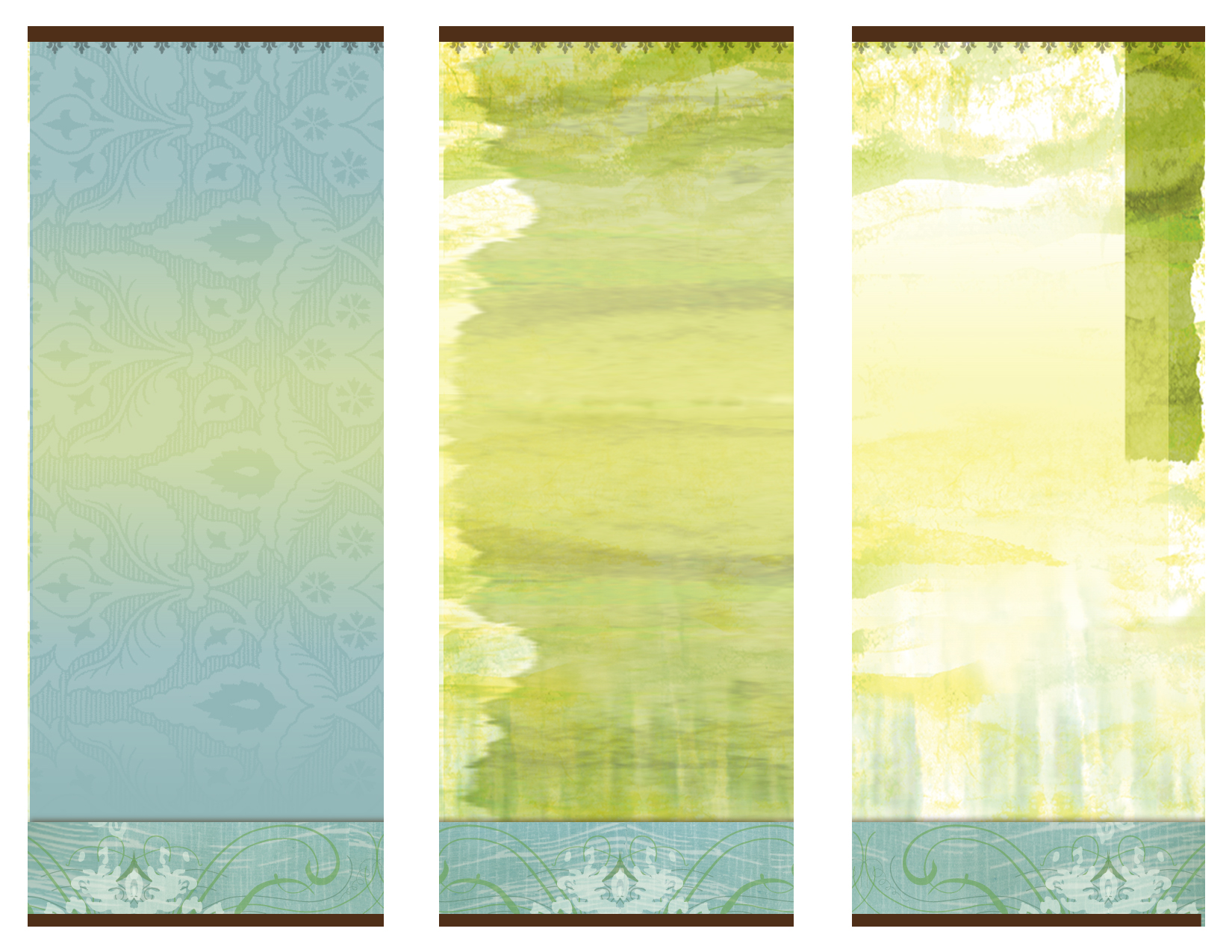


By: Charlotte Orbine

and Alyssa Frisco



Important charts and diagrams

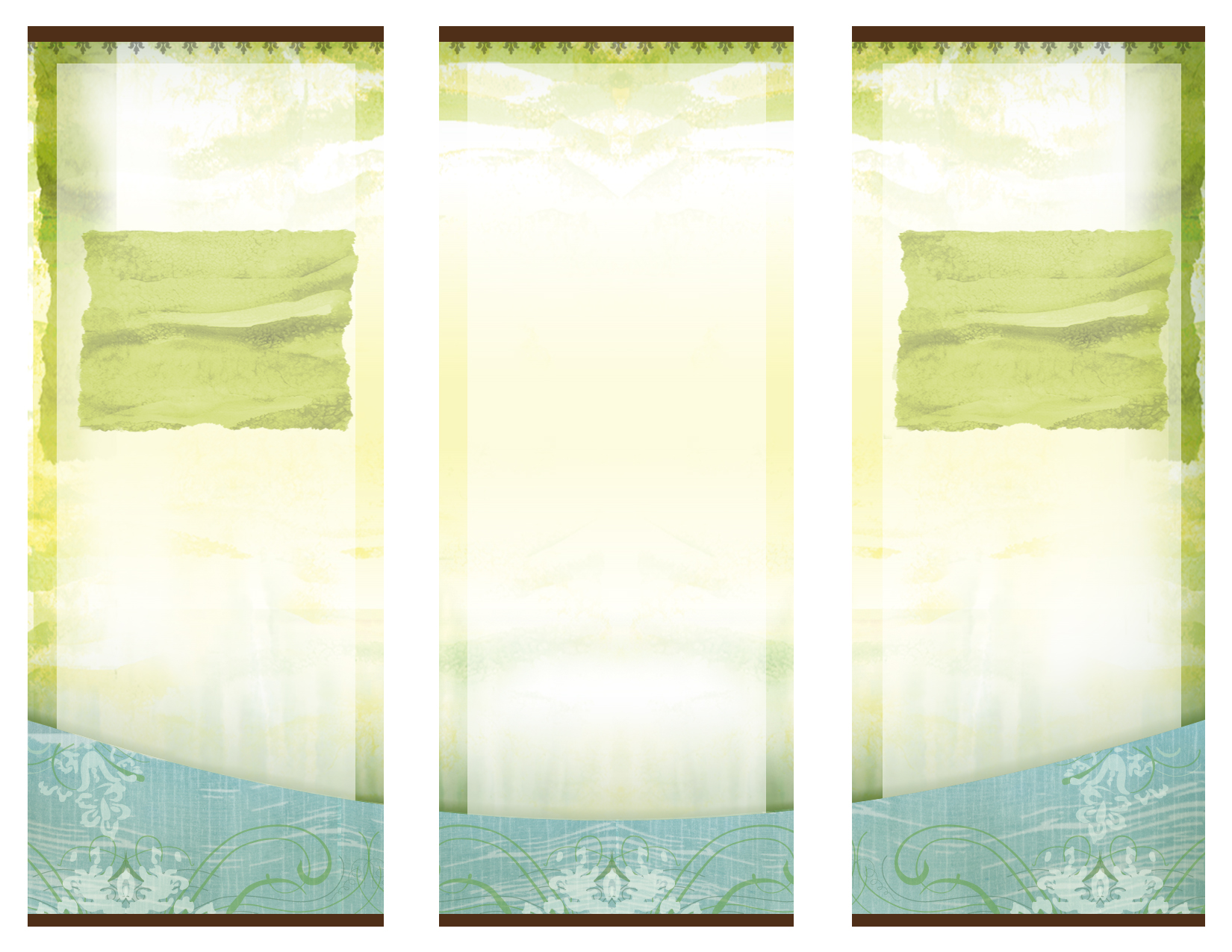


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**Other Applications**

**How it Generates Electricity**

**In a coal power plant, the first thing that happens is the coal burns. Then the burning coal heats the water. After that, the water turns into steam. Then the steam turns the turbine. Then the turbine turns the generator. Finally, the generator produces electricity.**



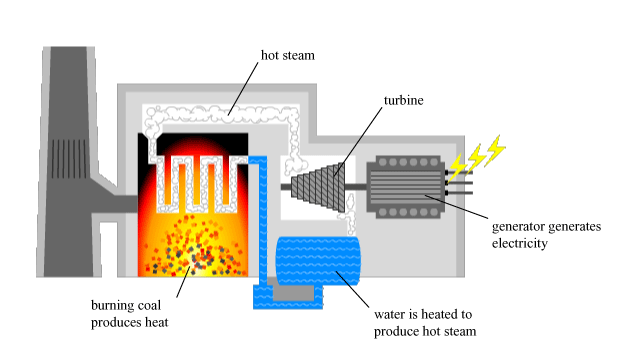
**Advantages and**



**Disanvantages**

8.<http://www.fi.edu/guide/hughes/powerplants.html>

9.<http://bobmccarty.com/2011/05/03/straightjacket-economics-restrain-growth/>



**Advantages**- Some advantages included a higher combustion temperature, improved thermal efficiency and a lower requirement for excess air for combustion. Coal can be found in a lot of places in the world and there is a lot in the UK. Coal is easy to transport to different power stations. Coal is a very cheap energy source.

**Disadvantages**- To dig up coal, you have to create mines which can be dangerous. Transporting coal by lorry and train from the mine to the power station causes pollution. Out of all energy sources, burning coal releases the most greenhouse gases which may add to global warming. Coal is a non-renewable source and could run out in about 100 years.

Coal is used for other things besides electricity. Coal is used to make iron and steal. It is also used to make glass, ceramics, and paper industries. In industrial processes heating coal is used to heat boilers and ovens. Also it is a source of heat for manufacturing processes. Also when coal is melted it is used for plastics, roofing, paint products, medicines, synthetic rubber, solvents and synthetic fibers. It is in the making of perfume.

**Citations**

1.<http://www.rst2.edu/ties/acidrain/iecoal/how.htm>

2. <http://www.hk-phy.org/energy/power/print/elect_is_print_e.html>

3.<http://www.instituteforenergyresearch.org/2010/09/01/some-coal-fired-power-plants-were-built-last-year-is-this-the-start-of-a-new-trend-or-are-new-coal-plants-dead/>

4.http://www.childrensuniversity.manchester.ac.uk/interactives/science/energy/discovermore/advanta ges.pdf

5. <http://www.tva.com/power/images/coalart.png>

6. <http://www.uky.edu/KGS/coal/uses_of_coal.htm>

7. <http://geology.com/rocks/coal.shtml>